

Title (en)
METHOD FOR PREPARING WHITE PAPER

Title (de)
VERFAHREN ZUR HERSTELLUNG VON WEISSEM PAPIER

Title (fr)
PROCÉDÉ POUR PRÉPARER DU PAPIER BLANC

Publication
EP 2596170 B1 20180502 (EN)

Application
EP 11735806 A 20110722

Priority
• EP 11005290 A 20110629
• EP 10007659 A 20100723
• EP 2011003692 W 20110722
• EP 11735806 A 20110722

Abstract (en)
[origin: WO2012010326A1] Object of the invention is the method for preparing white paper which comprises adding to the pulp mass an aqueous formulation comprising a) at least one optical brightener of formula (I) in which the anionic charge on the brightener is balanced by a cationic charge composed of one or more identical or different cations selected from the group consisting of hydrogen, an alkali metal cation, alkaline earth metal, ammonium, ammonium which is mono-, di-, tri- or tetrasubstituted by a C1- C4 linear or branched alkyl radical, ammonium which is mono-, di-, tri- or tetrasubstituted by a C1-C4 linear or branched hydroxyalkyl radical, ammonium which is, di-, tri- or tetrasubstituted by a mixture of C1-C4 linear or branched alkylradical and linear or branched hydroxyalkyl radical or mixtures of said compounds, wherein R1 and R1' may be the same or different, and each is hydrogen, C1-C4 linear or branched alkyl, C2-C4 linear or branched hydroxyalkyl, CH₂CO₂ -, CH₂CH₂CONH₂ or CH₂CH₂CN, R2 and R2' may be the same or different, and each is C2C4 linear or branched alkyl, C2-C4 linear or branched hydroxyalkyl, C₂H₅CO₂ -, CH(CO₂ -)CH₂CO₂ -, CH(CO₂ -)CH₂CH₂CO₂ -, CH₂CH₂SO₃ -, CH₂CH₂CO₂ -, CH₂CH(CH₃)CO₂ -, benzyl, or R1 and R2 and/or R1' and R2', together with the neighboring nitrogen atom signify a morpholine ring; R3 signifies hydrogen, -CO₂ - or -SO₃ - and p is 0, 1 or 2, and at least one shading dye of formula (II) in which R4 signifies H, methyl or ethyl, R5 signifies paramethoxyphenyl, methyl or ethyl, M signifies a cation selected from the group consisting of hydrogen, an alkali metal cation, alkaline earth metal, ammonium, ammonium which is mono-, di-, tri- or tetrasubstituted by a C1-C4 linear or branched alkyl radical, ammonium which is mono-, di-, tri- or tetrasubstituted by a C1-C4 linear or branched hydroxyalkyl radical, ammonium which is, di-, tri- or tetrasubstituted by a mixture of C1-C4 linear or branched alkylradical and linear or branched hydroxyalkyl radical or mixtures of said compounds, optionally one or more auxiliaries and water.

IPC 8 full level
D21H 17/09 (2006.01); **D21H 21/28** (2006.01); **D21H 21/30** (2006.01); **D21H 21/32** (2006.01)

CPC (source: EP KR US)
D21H 3/82 (2013.01 - KR); **D21H 17/09** (2013.01 - US); **D21H 21/28** (2013.01 - EP US); **D21H 21/30** (2013.01 - EP KR US); **D21H 21/32** (2013.01 - EP KR US)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
WO 2012010326 A1 20120126; AR 082329 A1 20121128; AU 2011281933 A1 20121129; BR 112013000113 A2 20190806; BR 112013000113 B1 20201110; CA 2806305 A1 20120126; CN 102959156 A 20130306; EP 2596170 A1 20130529; EP 2596170 B1 20180502; ES 2676171 T3 20180717; JP 2013536325 A 20130919; KR 20130102525 A 20130917; PL 2596170 T3 20181130; PT 2596170 T 20180730; RU 2013108086 A 20140827; RU 2564815 C2 20151010; TR 201810024 T4 20180827; TW 201217610 A 20120501; US 2013118698 A1 20130516; ZA 201208498 B 20130925

DOCDB simple family (application)
EP 2011003692 W 20110722; AR P110102664 A 20110722; AU 2011281933 A 20110722; BR 112013000113 A 20110722; CA 2806305 A 20110722; CN 201180030226 A 20110722; EP 11735806 A 20110722; ES 11735806 T 20110722; JP 2013520010 A 20110722; KR 20137000272 A 20110722; PL 11735806 T 20110722; PT 11735806 T 20110722; RU 2013108086 A 20110722; TR 201810024 T 20110722; TW 100125986 A 20110722; US 201113811613 A 20110722; ZA 201208498 A 20121112